

## **REMARKS**

### **I. Introduction**

This paper is in response to the non-Final Office Action mailed on June 13, 2006. Claim 1 and 14 have been amended. Supports for the amendment can be found in the specification, e.g., p 6-7 as well as in the original claims, e.g., Claims 1 and 11-14. In addition, Claims 5 and 6 have been amended for clarification. No new matter has been added.

### **II. Claim objections**

Claim 17 was objected to because of the chemical term, “dioxin.” It is noted that Claim 17 does not recite “dioxin” but states “dioxan,” which is interchangeable with “dioxane.” Applicants failed to find any reasonable basis for this objection. Withdrawal of the objection is respectfully requested.

### **III. Claim Rejection under 35 U.S.C. §112**

Claims 5 and 6 were rejected under §112, second paragraph for its use of the term “containing.” The Examiner suggested that use of this term in relation to identifying substituents of a chemical group is indefinite and recommended to change it to “having.” The Applicants disagree that the meanings of “containing” and “having” in the context of the claims are different. Nevertheless, Applicants have amended “containing” to “having.” This amendment should not be considered as a narrowing amendment in its scope.

Claim 13 is rejected under §112, first paragraph because the specification does not provide enabling descriptions for all the acidic catalysts known in the field of chemistry. Applicants respectfully disagree. It is well known law that a “specification may, within the meaning of 35 U.S.C. §112, first paragraph, contain a written description of a broadly claimed invention without describing all species that claim encompasses.” *Utter v. Hiraga*, 845 F.2d

993, 998 (Fed. Cir. 1988). As long as the specification provides a reasonable description that apprises the ordinary artisan, in light of what is well known in the art, how to make and how to use a claimed invention throughout its scope, the claim would meet the enablement requirement. *See* MPEP. §2164.

As the specification noted, e.g., paragraph 27, the acid catalysts disclosed therein are only exemplified catalysts, and a wide range of other acid catalysts that have similar chemical properties can also be used in the hydrolysis. Identifying or determining of an appropriate acid catalyst that is mild enough to work with the process disclosed in the specification does not entail undue experimentation especially in view of the specification.

Therefore, withdrawal of this rejection is respectfully requested.

#### **IV. Rejections under 35 U.S.C. §103(a)**

Claims 1-8, 11-12 and 14-23 are rejected under 35 U.S.C. 103(a) as being obvious over Cesa et al in view of Nicholson et al. The Examiner asserted, in response to Applicants' previously submitted arguments, that the claims are not directed to the increased catalytic activity of the claimed process using nitrogen or oxygen containing organic compounds, but the claims are more directed to the process for preparing a 2-hydroxy carboxylic acid using a reusable catalyst. See page 20 of the office action.

On response, Applicants assert that It is not correct that the claimed invention is directed only to the process for preparing a 2-hydroxy carboxylic acid using a reusable catalyst. As the specification clearly indicates, the current invention is related to a process for the preparation of 2-hydroxy carboxylic acids, which overcomes the drawbacks of the prior art processes such as low activity, lack of catalyst stability, use of toxic chemicals, and several operating conditions. See, for example, paragraph 10 of the specification. Although the claims

themselves do not specifically recite all of these advantages of the present process, they are inherent properties of the process and such recitation of the advantages are not required to describe the process.

The Examiner also stated that Cesa et al still teaches an organic ligand surrounding a palladium catalyst. However, the palladium catalyzed reaction disclosed in Cesa et al. does not use substituted ligands. This is a distinguishing feature relative to the present invention, where the ligands for the palladium catalysts are substituted with ligands, as specified in the claims, in situ during the reaction, resulting in an improved process, described in the specification. Neither Cesa nor Nicholson teaches or suggests use of the palladium catalysts with specific ligands for preparation of a 2-hydroxy carboxylic acid to achieve the advantages of the present invention., *e.g.*, increased activity, stability of the catalyst for recycling, *etc.*

Furthermore, Nicholson et al relates to production of aldehydes and does not provide any teachings for hydroxyl acid production that the present invention is directed to.

## **V. Conclusion**

In view of the above amendments and remarks, Applicants respectfully request that the rejections be removed and that the claims be allowed to issue.

Respectfully submitted,  
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